Attorney Docket: DID1047US

Amendment and Response

Applicants: Edgardo Costa Maianti et al.

Serial No.: 10/805,165

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Amendments to the Claims:

1. (Previously presented) An integrated device for oxygenating and filtering blood flowing through an extracorporeal blood circuit comprising:

a blood reservoir having an inlet for receiving venous blood and an outlet for supplying venous blood;

a blood pump having an inlet connected to receive blood from the outlet of the blood reservoir and an outlet;

a heat exchanger having a blood inlet connected to receive venous blood from the outlet of the pump and a blood outlet for supplying temperature controlled venous blood, the blood inlet being located below the blood outlet to define a blood flow path from a bottom of the heat exchanger to a top of the heat exchanger;

an oxygenator having an inlet connected to receive venous blood from the outlet of the heat exchanger and an outlet for supplying oxygenated blood;

an arterial blood filter having an inlet connected to receive oxygenated blood from the outlet of the oxygenator and an outlet for supplying filtered oxygenated blood; and

a monolithic housing including a first portion for defining the blood reservoir, a second portion for defining the blood pump, a third portion for defining the heat exchanger, a fourth portion for defining the oxygenator and a fifth portion for defining the arterial blood filter.

2. (Original) The integrated device of claim 1 wherein the blood pump comprises a centrifugal pump.



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- 3. (Original) The integrated device of claim 2 wherein the centrifugal pump has an axis and wherein the centrifugal pump is positioned within the monolithic housing such that the axis of the centrifugal pump is horizontal.
- 4. (Original) The integrated device of claim 1 wherein the blood reservoir comprises a venous reservoir and a cardiotomy reservoir.
- 5. (Original) The integrated device of claim 4 wherein the monolithic housing comprises connection means for allowing removeable connection of the first portion.
- 6. (Currently Amended) A system for establishing an extracorporeal blood circuit comprising:
 - a blood reservoir;
 - a blood pump;
 - a heat exchanger;
 - an oxygenator;
 - an arterial blood filter; and
- a housing for incorporating and interconnecting the blood reservoir, the blood pump, the heat exchanger, the oxygenator and the arterial blood filter into a monolithic structure, the housing having an inlet for supplying venous blood to the blood reservoir and an outlet for supplying oxygenated blood from the arterial blood filter, a top portion of the housing defining the blood reservoir, and a bottom portion of the housing defining the blood pump inlet and a blood pump outlet.

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- 7. (Original) The system of claim 6 wherein the blood pump comprises a centrifugal pump.
- 8. (Original) The system of claim 7 wherein the centrifugal pump has an axis and wherein the centrifugal pump is positioned within the housing such that the axis of the centrifugal pump is horizontal.
- 9. (Original) The system of claim 6 wherein the blood reservoir comprises a venous reservoir and a cardiotomy reservoir.
- 10. (Original) The integrated device of claim 9 wherein the housing comprises connection means for allowing removeable connection of the blood reservoir.